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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/605,008	09/01/2003	Jen-Yu Hsu	LITP0003USA	2007

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EXAMINER	
DANIELSEN, NATHAN ANDREW	
ART UNIT	PAPER NUMBER

2627

DATE MAILED: 04/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/605,008	Applicant(s) HSU ET AL.	
	Examiner Nathan Danielsen	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 September 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-8 are pending.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

3. Figure 7 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4. The abstract of the disclosure is objected to because "'rack on" process" should be --"track on" process". Correction is required. See MPEP § 608.01(b).
5. The disclosure is objected to because of the following informalities: all instances of "'rack on'" should be --"track on"-- and "O'n track'" should be --"On track"--. Additionally, all instances of missing spaces should be corrected, such as "head)with" in ¶ 0004 and "controlled,it" in ¶ 5.

Appropriate correction is required.

Claim Objections

6. Claims 2 and 6 are objected to because "a "On Track" signal" should be --an "On Track" signal". Additionally, the structure in these claims is grammatically awkward. The examiner

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suggests that "when control of the pickup head is switched" should be changed to --wherein the switching control of the pickup head--, or an equivalent". Claims 2-4 and 6-8 are objected to because the phrase "The method of claim X" should be --The method of claim X,--. Appropriate correction is required.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Masaki et al (hereinafter Masaki) (US Patent 5,481,510).

Regarding claim 1, Masaki discloses a method for processing error control for a seeking servo of an optical disk drive comprising following steps:

calculating a "track on" time when the control of a pickup head is switched from a seeking servo system to a tracking servo system (in light of Applicant's disclosure (¶ 40), the examiner interprets the calculating of a "track on" time to mean the measurement of an elapsed time from when control is switched to tracking control to the time where the tracking servo system has locked on to the target track; therefore, Masaki discloses this limitation in that "if an off-track is detected during a seek operation when the track servo is on, the track error signal TES will not converge" (col. 13, lines 28-30) meaning that the time for the tracking error TES to converge is monitored, and if the monitored

time exceeds a predetermined period of time, the tracking error TES is said to have not converged);

moving the pickup head to the center of a movable range when the "track on" process is not completed in a predetermined time ("when such a retry of turning on the track servo is carried out, the position control of the optical head 10 by the positioner 12 is temporarily suspended; at this time, the positioner 12 may be moved by the offset of the circuit or the tension of the positioner cable" (col. 13, lines 31-36) where the examiner interprets Applicant's "center of a movable range" to mean a resting position toward which the pickup head will naturally move); and

switching control of the pickup head to the tracking servo system (see preceding citation).

Regarding claim 2, Masaki discloses the method according to claim 1, when control of the pickup head is switched from the seeking servo system to the tracking servo system is determined by an "On Track" signal (suggested by "if an off-track is detected during a seek operation when the track servo is on" (col. 13, lines 28-29)).

Regarding claim 3, Masaki discloses the method of claim 1 wherein a center servo control system is provided to move the pickup head to the center of the movable range (see the citation for the second limitation in claim 1).

Regarding claim 4, Masaki discloses the method of claim 1 wherein the pickup head oscillates at a natural frequency and moves to the center of the movable range by natural damping (inherent when the pickup head is being held by elastic members that are not

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exerting equal and opposite forces on it and the servo control is turned off, such as the positioner cable in col. 10, lines 34-36).

9. Claims 5-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Ikeda (US Patent 5,870,356).

Regarding claim 5, Ikeda discloses a method for processing error control for a seeking servo of an optical disk drive comprising following steps:

detecting a center error signal when control of a pickup head is switched from a seeking servo system to a tracking servo system ("the lens position signal is used to prevent optical axial deviation of an objective lens which occurs when the objective lens is moved from a neutral position and during the seek of a carriage" (col. 2, lines 5-8));

moving the pickup head to the center of a movable range when the center error signal exceeds a predetermined value ("for this purpose, it is necessary to perform a lens lock control for positioning the lens actuator so as to keep the optical axial deviation of the objective lens to zero" (col. 2, lines 8-11)); and switching control of the pickup head to the tracking servo system ("when the light beam arrives at the target track, a control mode is switched to a position control, the light beam is pulled into the track center, and after completion of a settlement, a reading or writing operation is started" (col. 2, lines 34-38)).

Regarding claim 6, Ikeda discloses the method according to claim 5, when control of the pickup head is switched from the seeking servo system to the tracking servo system is determined by an "On Track" signal (see the citation for the third limitation of claim 5).

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Regarding claim 7, Ikeda discloses the method of claim 5 wherein a center servo control system is provided to move the pickup head to the center of the movable range (see the citation for the first limitation of claim 5).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeda, in view of the Applicant's admitted prior art (hereinafter the AAPA).

Regarding claim 8, Ikeda discloses everything claimed, as applied to claim 5. However, Ikeda fails to disclose where the pickup head oscillates at a natural frequency and moves to the center of the movable range by natural damping.

In the same field of endeavor, the AAPA discloses where the pickup head oscillates at a natural frequency and moves to the center of the movable range by natural damping (inherent when the pickup head is being held by elastic members that are not exerting equal and opposite forces on it and the servo control is turned off, such as the springs shown in figures 1-3 and suggested by ¶s 13-15).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have allowed the attached elastic members to move the pickup head to a more neutral position, as taught by the AAPA, for the purpose of allowing for the objective lens to move for tracking servo and to determine when the pickup head is in the center of the moveable range (¶s 13 and 15).

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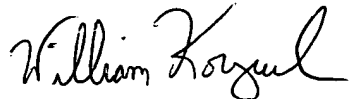
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan Danielsen whose telephone number is (571) 272-4248. The examiner can normally be reached on Monday-Friday, 8:30 AM - 4:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, A.L. Wellington can be reached on (571) 272-4483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nathan Danielsen *ND*
03/28/2006


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